

CLAIMS:

1. Pressure regulator module (1) for a vehicle pneumatic braking system, particularly of a utility vehicle, for the wheel-slip-dependent controlling or regulating of braking pressures applied to two separate working connections (30, 32), and comprising a two-conduit valve unit (2) having one relay valve (6,8) for each conduit (A,B), characterized in that, in each case, only one solenoid control valve (10, 12) constructed as a 3/2-way valve (10, 12) is assigned to the control inputs (14, 16) of each of the two relay valves (6, 8).

2. Pressure regulator module according to Claim 1, characterized in that the solenoid control valves (10, 12),

- without the insertion of additional valves, connect the control input (14, 16) of the respective relay valve (6, 8) with a bleeding system (28) or with a control pressure (54), or
- together with only one additional solenoid control valve (76) connect the control input (14, 16) of the respective relay valve (6, 8) with the bleeding system (28), with a control pressure (80) or with a compressed-air reservoir (22).

3. Pressure regulator module according to Claim 2,

characterized in that the two solenoid control valves (10, 12) are controlled independently of one another by an electronic controlling and regulating unit (72), and are connected on the input side with the control pressure (54) and on the output side, in each case, with the control input (14, 16) of the assigned relay valve (6, 8) and with the bleeding system (28).

4. Pressure regulator module according to Claim 3, characterized in that, in the non-energized spring-loaded normal position, the solenoid control valves (10, 12) switch the control pressure (54) through to the control inputs (14, 16) of the relay valves (6, 8) and, in the energized position, switch the control inputs (14, 16) of the relay valves (6, 8) through to the bleeding system (28).

5. Pressure regulator module according to Claim 4, characterized in that, for keeping the pressure at the working connection (30,32) of the respective conduit (A, B), the assigned solenoid control valve (10, 12) is alternately switched back and forth in the pressure buildup position and the pressure reduction position by means of the controlling and regulating unit (72).

6. Pressure regulator module according to one of Claims 2 to 5, characterized in that the additional solenoid control valve

(76) is formed by an additional 3/2-way valve which is controlled by the electronic controlling and regulating unit (72) and which is connected on the input side with the control pressure (80) and on the output side with the inputs (50, 52) of the two solenoid control valves (10, 12) and with the compressed-air reservoir (22).

7. Pressure regulator module according to Claim 6, characterized in that, in the non-energized spring-loaded normal position, the additional solenoid control valve (76) switches the control pressure (80) through to the inputs (50, 52) of the two solenoid control valves (10, 12) and in the energized position, switches the inputs (50, 52) of the two solenoid control valves (10, 12) through to the compressed-air reservoir (22).

8. Pressure regulator module according to Claim 7, characterized in that the additional solenoid control valve (76) is operated independently of the control pressure (80) and as a function of a wheel slip occurring during an acceleration or of the lateral acceleration.

9. Pressure regulator module according to Claim 8, characterized in that the additional solenoid control valve (76) is integrated in a housing (78) accommodating the valve unit (2).

10. Pressure regulator module according to Claim 9, characterized in that the additional solenoid control valve (76) is arranged outside a housing (78) accommodating the remaining valve unit (2) consisting of the two relay valves (6,8) and the assigned solenoid control valves (10, 12), and is constructed to be connectable to this valve unit (2).

11. Pressure regulator module according to one of the preceding claims, characterized in that the center axes of the two relay valves (6, 8) are arranged coaxially and horizontally.

12. Pressure regulator module according to one of the preceding claims, characterized in that an acceleration sensor is provided for detecting the lateral acceleration, which sensor is preferably integrated in the electronic unit (4).